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Farmers' perception of agricultural extension agents' characteristics as factors for enhancing adult learning in Mezam division of Northwest Province of Cameroon

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The education of farmers would be result oriented if among other things the learning enhancement situations are created. Farmers' receptivity to training largely depends on the use of several educational methods by extension agents to reach farmers in Mezam division of Northwest province of Cameroon. Data were collected from May to August 2000 using Kerlinger's n ≥ 30 sampling technique in the division since no definite sampling frame could be obtained. The result indicates that majority are males (62.5%); less than 40 years of age (68.6%), had formal education (81.3%), and can speak and write English language (56.3%).

Farm visit is the most used teaching method (37.5%), while office calls (12.5%), group meetings (12.5%), and field days (6.3%) recorded low scores in the study area. The factor that was rated

as the most important in enhancing learning of the farmers was that extension agents should be knowledgeable in farming (87.5%). The agent being a farmer and educated (56.3% each) follows this, language came fourth on the importance list (50%).

Introduction

Agricultural education and extension systems have expanded tremendously, but often the development of new and more efficient training programmes and methodologies has lagged behind (Oladele, 1999). Agricultural education is becoming increasingly important in countries which depend heavily on agriculture for both the living of the majority of their population and their export earnings. Often the development potentials for the agricultural sector exist, while the agricultural education system, be it formal or non-formal, has not kept pace with the changing conditions of society (Bagchee, 1994). There are important similarities and differences between formal and non-formal education as they exist today. They have been organized to augment and improve upon the informal learning process – in other words, to promote and facilitate certain valued types of learning (such as reading and writing) that individuals cannot as readily or quickly acquire through ordinary exposure to their environment. These two modes of education are sometimes similar also in pedagogical form and methods (Adams 1982).

ICED (1975) reported that educationists have identified three sources of knowledge and education as being useful, and generally in accord with current realities. To distinguish between the three modes of information education, formal, and non-formal (recognizing that there is considerable overlap and interaction between them), they are defined as follows. Information education is the lifelong process by which every person acquires and accumulates knowledge, skills,

attitudes, and insights from daily experiences and exposure to the environment. Formal education is the highly institutionalized, chronologically graded and hierarchically structured "education system", spanning lower primary school and the upper reaches of the university. Non-formal education is any organized, systematic, educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups of the population. Thus defined, non-formal education includes, for example, agricultural extension and farmer training programs.

Extension has a vital role in ensuring that researchers are aware of problems that farmers face. A partnership is therefore needed between the research system, which generates technology, the extension agency, which transfers technology, and the farmers who use the technology. Extension is most effective when relationships among the partners encourage dynamic, open communication, and feedback. Close and regular contact with farmers is obviously essential. Ideally, extension transmits problem-solving information to farmers and information on farmers' problems back to the research system.

The World Bank has invested almost $2 billion in extension in 79 countries since the mid-1960s, with investment rising from about $1 million per year in the 1960s to almost $200 million per year in the 1980s. Extension services can be organized in different ways, and various models have emerged. Much of the Bank's investment has been in the training and visit (T&V) system of extension, originally used in Asia and now in use in 30 African countries (Saito and Weidemann, 1990).

Any extension system must target particular categories of clients to meet their needs efficiently. One lesson to be learnt from the Asian experience of T&V is that training of extension workers should focus not only on the technical message to be transferred but also on learning more about "their farmers" and "their farming system",

especially about farmers' behaviour and the reasons they do things the way they do (Cernea and others, 1983). This is especially crucial in sub-Saharan African, where men and women within one household can have different resources, motivations, and constraints. Furthermore, face-to-face contact between agents and village level workers is particularly important when agricultural communities are heavily involved in subsistence agriculture and when large numbers of farmers are illiterate or unfamiliar with current technologies (Pickering, 1983).

Extension services in Cameroon can be traced to the MIDENO project which began in the early 1970s. In the early stages of the MIDENO project in the Cameroon, extension agents were encouraged to meet with farmers' groups but individuals could also request that extension agents (EAs) visit their farms. Also, farmers who purchased inputs were often visited. Analysis indicated that farmers who experienced farm visits and group meetings understood the recommendations better and were more likely to adopt them than those who only attended group meetings. Although assistance was supposed to be the same for men and women, men in the survey received eight times more individual farm visits than did women. Male farmers had little reluctance to ask for farm visits. Many women indicated that they did not think they could nor should ask or were "too far away" to rate a visit. Others thought visits were reserved for farmers who purchased inputs, something which fewer women did than men. For their part, the EAs concluded that women did not ask for visits because they were not interested. It was evident that the strategy of asking farmers to step forward to request visits was not as appropriate for women as for men (Koons 1988). The situation improved under later project initiatives for expanded extension delivery to women farmers (Walker 1989).

Rogers (1971) reported that the success of an extension agent is positively related to the extent of his effort, client orientation, the

degree of program compatibility with clients' needs and agents empathy with clients. Others indicators that affect the relationship are established include clients' higher social status, greater social participation among clients, higher education and literacy of clients and the cosmopoliteness of the clients. To enhance learning among the clients, the following characteristics were identified by Rogers (1983): agents homophily with clients; the extent to which agent works through opinion leaders; creditability of agents as perceived by the clients; and agents efforts in increasing the client's ability to evaluate innovations.

Farmers as the clients in the extension teaching-learning situation share similar characteristics with the audience in the communication process, which Schrammn (1973) reported could act as the mediator through the concepts of selective attention, selective perception, selective recall. The audience as the information processor exerts their preference for types of information and this is reflected in their characteristic ways of receiving information. The audience as a defender of its ego defines the audience as being reasonably deliberate in the use of information as well as the understanding of why and for what reasons some communication are attended to. The audience as a pleaser of others shows a personality variable exhibited by the motive to please others by compliance. The audience as a member of a group establishes the social ties among the audience, which influences the use of reference groups as guide for what to expect and how to react to the messages directed at them.

The educational needs for rural development referred to earlier are numerous and diverse, but they can be usefully grouped under four main headings. These are 1) General or basic education: literacy, numeracy, and elementary understanding of science and one's environment; what primary and general secondary schools seek to achieve: 2) Family improvement education, designed primarily to impart knowledge, skills and attitudes, useful in improving the quality

of family life, on such subjects as health and nutrition, homemaking and child care, home repairs and improvements, family planning, and so on: 3) Community improvement education, designed to strengthen local and national institutions and processes through instruction in such matters as local and national government, co-operatives, community projects, and the like: 4) Occupational education, designed to develop particular knowledge and skills associated with various economic activities and useful in making a living (Lele, 1975).

Need for the study

The assumption often made in meeting the educational needs for rural development is that rural target groups can make better use of the services and suggestions for improvement that are offered to them if the people working as consultants and negotiators have a better understanding of the natural environment and a basic knowledge of the society and economy. However education is needed and at the same time not enough education is available to rural target groups. Must target groups be educated or the projects have to adapt themselves to the existing level of target groups? The following questions emanate from their situation: What characteristics of extension agents enhance learning? What are the extension teaching methods used in reaching the farmers? Which of these methods are preferred? What are the personal characteristics of the farmers?

Purpose and objectives of the study

The general purpose of this study was to determine the factors that enhance learning among farmers in Mezam division of Cameroon. Specific objectives developed to accomplish the purpose are to:

1. Identify the personal characteristic of the farmers
2. Identify the extension teaching methods used among farmers
3. Ascertain those methods that are preferred by farmers

4. Determine the characteristics of extension agents enhancing learning among farmers

Methodology

The study was carried out in Mezam division, the provincial capital of the Northwest Province of Cameroon. Farming is the main occupation of the people in the area. Crops usually grown include maize, yam, cassava, cocoyam, melon and vegetables under mixed cropping practices. Livestock rearing was combined with crop production.

Sampling procedure and sampling size:

The target population of this study consisted of farmers. There was no definite sampling frame, however a large sample size technique of n>30 was used to select 32 farmers in the province (Kerlinger, 1973).

Instrument for data collection

Data for this study were collected from May to August 2000 through the use of a structured questionnaire. The questionnaire was subjected to face validity before administration. Information elicited from farmers included personal characteristics, farmers' perceptions of agent characteristics as factors for enhancing learning, extension methods used in reaching farmers, and the preferred extension methods by farmers.

Personal characteristics were operationalised in terms of age, gender, marital status, family size, and educational level. Farmers' perceptions were determined through a 3- point rating scale of the agents characteristics of very important, important and not important. Extension methods were ranked in preference and these methods were also indicated in terms of the frequency with which farmers experience them.

Data analysis

Data collected were coded and subjected to frequency counts, percentages, and chi-square analysis. The scores for the perceptions were dichotomized and the relationship between it and selected personal characteristics were examined. These were then subjected to frequency counts, percentages, and chi-square statistics.

Results and discussion

Table 1 shows that about 62 percent of the respondents are male and that a majority of the farmers are less than 40 years of age (68.6%). This shows that they are in the active years of labour. In the same vein, the majority are married (87.5%), reflecting an indication that the socio-cultural reasons behind marriage are being upheld. Family labour as a source of farm labour can also be responsible for a majority being married. With respect to the family size of the respondents, 56.2 percent had at least seven children. A large family size is an indication of rural areas with greater propensity for large farm sizes (World Bank 1989). Only 18.8% of the farmers had non-formal education while the remaining 81.3% had a formal education. It could then be concluded that the respondents could be proved to have a understanding of extension messages.

Table 1: Socio-personal characteristics and language ability of respondents, Mezam Division, northwest province, Cameroon, 2000, n = 32

Gender		
Male	20	62.5
Female	12	37.5
Age		
Less than 30	10	34.3
30–40	10	34.3
41–50	6	18.8
Greater than 50	6	18.8
Marital Status		
Married	28	87.5
Divorced	2	6.3
Separated	2	6.3
Family size		
1–3	4	12.5
4–6	10	34.3
7 and above	18	56.2
Education		
Formal	26	81.3
Non-formal	6	18.8

Table 2 presents the methods of extension teaching used the preference of farmers for the methods. While the farm visit was prominent among the methods used in reaching the farmers (37.5%), the demonstration was not used at all. As effective as the method

is, its implication for use is enormous in terms of cost, manpower, and number of farm families to be reached. Home visits were the next popular method used by extension agents to reach the farmers (25.0%), followed by group meetings (12.5%). The non-use of demonstration as a teaching method may be associated with the non-availability of teaching aids and specimens to illustrate the practice being pushed to the farmers.

Farmers' preferences for extension teaching methods as presented in Table 2 shows that farm visit is the most preferred method (50%). This may be connected with the use of farm visits by extension agent thus forming a perpetual habit. The situation of having the full attention of the extension agent and the likelihood that the agent can identify other problems on the farm might be responsible for this. Next on the preference list is the home visit extension teaching method. This may be associated with the fact that during home visits between farmers and extension agents, face-to-face communication is established and both parties give maximum attention to this. In this way, issues that are not only agricultural are also raised and discussed.

Demonstrations were ranked third by farmers after farm and home visits. This is may be due to the fact adult learners make maximum use of their senses in order to learn effectively. Demonstrations will enhance their use of these senses. The implications of the extension teaching methods used and farmers' preferences for one of three methods is that several factors that enhance learning have to be considered. The effectiveness of the method used will depend on the learning enhancement characteristics created in the teaching-learning situation.

Table 2: Extension teaching methods used and their preference among farmers, Mezam Division, northwest province, Cameroon, 2000, n = 32

	Method of Contact	**Method Preferred**
Home Contact	8 (25%)	6 (18.8%)
Farm Visit	12 (37.5%)	16 (50.0%)
Office calls	4 (12.5%)	-
Training	2 (6.3%)	2 (6.3%)
Group Meeting	4 (12.5%)	2 (6.3%)
Field days	2 (6.3%)	2 (6.3%)
Demonstration	-	4 (12.5%)

Table 3 shows farmers' perception of characteristics of extension agents that enhance learning on a 3-point scale of very important, important and not important. Being knowledgeable in farming was rated as the most important factor that would enhance their learning (87.5%), followed by the agent being a farmer and educated (56.3% each). The factor of language came fourth on the importance list (50%). The issue of language, respect, and gender as important factors could be related to the mutual trust and respect associated with extension work and the socio-cultural reasons circumscribing human relationships (Adams, 1980). Gender targeting as a device to enhance agents' acceptability was introduced in the Cameroon in 1990. Four factors were rated as being very important in the teaching-learning situation. These are being knowledgeable in farming practices (81.3 percent); respectful (87.5 %); language (50 %) and being a practicing farmer (56.3 %). Only gender was rated as important (87.5 %). Rated as not important were age (87 %), marital status (93.8%) residing in the village (93.8 %) and patience (56.3 %).

Table 3: Characteristics of extension agents perceived by farmers enhancing learning, Mezam Division, northwest province, Cameroon, 2000, n = 32

Factors	Very Important	Important	Not Important
Speaks the same language	16(50)	10(31.3)	6(18.8)
Be of the same sex	2(6.3)	28(87.5)	2(6.3)
Educated	18(56.3)	10(31.3)	4(12.6)
Married	-	2(6.3)	30(93.8)
Be a practice farmer	18(56.3)	8(25.0)	6(18.8)
Resides in Village	-	2(6.3)	30(93.8)
Advance in age	2(6.3)	2(6.3)	28(87.0)
Respectful	28(87.5)	-	4(12.6)
Knowledgeable in farming practices	26(81.3)	2(6.3)	4(12.6)
Patience	10(31.3)	4(12.5)	18(56.3)

Table 4 shows the Chi-square analysis of selected personal characteristics of farmers and their perception of the agents' characteristics as learning enhancement factors. From the five variables only marital status and family size were not significant ($X^2 = 3.84$, $p > 0.05$ and $X^2 = 4.91$, $p > 0.05$ respectively). On the other hand gender, age, and contact with extension were significantly related to their perception of agents' characteristics ($X^2 = 4.84$, $p < 0.05$; $X^2 = 10.82$, $p < 0.05$ and $X^2 = 18.07$, $p < 0.05$ respectively).

The significance of gender might be related to the socio- cultural setting that circumscribes the male-female relationship. A gender targeting approach was introduced in Cameroon to alleviate this restriction (Walker 1989). The older the age of the agents the more credible the clients consider them. Contact with extension

agents is also significantly related to the perception of the agents characteristics for enhancing learning. This is the premise upon which perception and attitude formation by the clients are based. During agents visits, verbal and non-verbal communications of the agents are observed and interpreted as noted by Rogers (1981) *that one cannot not communicate*.

Table 4: Chi-square analysis of selected farmers characteristics and their perception of agents characteristics as learning enhancement factors

Variables	X^2	df	P	Remarks
Gender	4.84	1	p<0.05	S
Age	10.82	3	p<0.05	S
Marital status	3.84	2	p>0.05	NS
Family size	4.91	2	p>0.05	NS
Contact with extension	18.07	5	p<0.05	S

Conclusion

The study has clearly shown the factors involved in adult teaching-learning process that need be considered carefully in order to make the teaching learning process more effective on the part of the extension agents and other development workers. This will in turn improve the efficiency of the non-formal education as well as help the development workers gain acceptability among the clientele in the field of work.

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